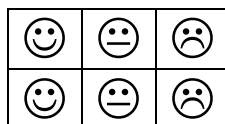
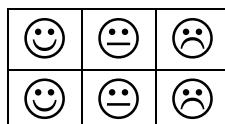


TRIGONOMETRIC GRAPHS AND FUNCTIONS

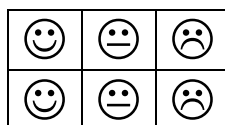
A: I can sketch basic graphs of trigonometric functions



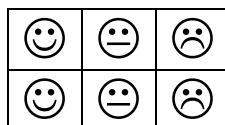
B: I can sketch graphs of trigonometric functions of the form $y = a \sin bx^\circ$, $y = a \cos bx^\circ$ and $y = \tan bx^\circ$



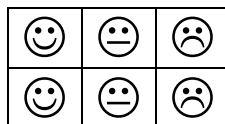
C: I can sketch graphs of trigonometric functions of the form $y = a \sin bx^\circ + c$, $y = a \cos bx^\circ + c$



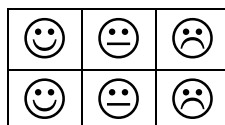
D: I can sketch graphs of trigonometric functions of the form $y = \sin(x - p)^\circ$, $y = \cos(x - p)^\circ$



E: I can find sine, cosine and tangent of angles between 0° and 360°



F: I can solve trigonometric equations



For $0 \leq x^\circ \leq 360^\circ$, sketch and annotate graphs of :-

- $y = \sin x^\circ$
- $y = \cos x^\circ$
- $y = \tan x^\circ$

State the amplitude and period of each trigonometric function above.

For $0 \leq x^\circ \leq 360^\circ$, sketch and annotate graphs of :-

- $y = 4 \sin x^\circ$
- $y = \cos 3x^\circ$
- $y = \tan 2x^\circ$
- $y = 3 \sin 2x^\circ$
- $y = 0.5 \cos x^\circ$
- $y = \sin \frac{1}{2}x^\circ$

State the amplitude and period of each trigonometric function above.

For $0 \leq x^\circ \leq 360^\circ$, sketch and annotate graphs of :-

- $y = \sin x^\circ + 2$
- $y = \cos x^\circ - 3$
- $y = 2 \sin x^\circ - 1$
- $y = \cos 2x^\circ + 1$
- $y = 2 \sin 3x^\circ + 1$

State the maximum and minimum values for each trigonometric function above.

For $-360 \leq x^\circ \leq 360^\circ$, sketch and annotate graphs of :-

- $y = \sin(x - 30)^\circ$
- $y = \cos(x + 45)^\circ$
- $y = \sin(x + 90)^\circ$

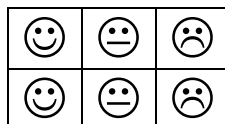
Find two values of x , between 0° and 360° , when:-

- $\cos x^\circ = 0.5$
- $\sin x^\circ = -0.3$
- $\tan x^\circ = 2.75$

Solve, for $0 \leq x^\circ \leq 360^\circ$:-

- $\cos x^\circ - 0.67 = 0$
- $\sin x^\circ + 0.8 = 0$
- $2 \tan x^\circ - 3.5 = 0$
- $3 \sin x^\circ - 1 = 0$
- $5 \cos x^\circ + 2 = 0$

G: I know trigonometric identities involving sin, cos and tan



Complete the following trigonometric identities:-

$$\sin^2 x^\circ + \dots = \dots$$

$$\tan x^\circ = \dots$$

Simplify:-

a) $1 - \sin^2 x^\circ$

b) $2\sin^2 x^\circ + 2\cos^2 x^\circ$

c) $\frac{1 - \cos^2 x^\circ}{5\sin x^\circ}$

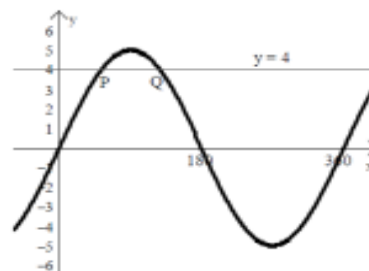
Show that:-

a) $\cos x^\circ \tan x^\circ - \sin x^\circ = 0$

b) $5 - 5\cos^2 x^\circ = 5\sin^2 x^\circ$

Write down the equation of the graph below in the form $y = a \sin x^\circ$.

The line $y = 4$ meets this graph at the points P and Q. Find the coordinates of P and Q.



H: I can solve problems involving trigonometric functions

